SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

Product Name: InstaGrout™ Base Sealant PMT (Part A) Part 10819

Product ID numbers: PMT-1, PMT-2, PMT-3, PMT-10
PMT-XXX (where XXX is the package code.)

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Sealant, polymer matrix barrier; two-part material

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

The Energy Network (Aust) Pty Ltd
2B/605 Zillmere Road
ZILLMERE, Queensland 4034, Australia
(07) 3212 8999
Email: sales@tengroup.com.au

1.4 Emergency telephone numbers

INFOTRAC: +1-352-323-3500
Poisons Information Centre 131 126

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

Acute Toxicity, Cat 4; H332
Skin Irritation, Cat 2; H315
Eye Irritation, Cat 2A; H319
Respiratory Sensitization, Cat 1; H334
Skin Sensitization, Cat 1; H317
Carcinogenicity, Cat 2; H351
Target Organ Toxicity (single exposure), Cat 3; H335
Target Organ Toxicity (repeated exposure), Cat 2; H373

2.2 Label elements

Contains: Polymeric diphenylmethane diisocyanate; 4,4'-Diphenylmethane diisocyanate (MDI)

Pictograms:

Signal word: Danger

Hazard Statements:

H332	Harmful if inhaled.
H315	Causes skin irritation.

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated inhalative exposure.

Precautionary Statements:

P260	Do not breathe fumes.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing and eye protection.
P284	In case of inadequate ventilation wear respiratory protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Gest medical attention.
P333 + P313	If skin irritation or rash occurs: Get medical attention.
P337 + P313	If eye irritation persists: Get medical attention.
P342 + P311	If experiencing respiratory symptoms: Call a poison center or doctor.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container in accordance with local and national regulations.

2.3 Other hazards: No information available.

3. Composition/Information on Ingredients

Component	CAS #	EC #	Wt. %
Polymeric diphenylmethane diisocyanate	9016-87-9		50 - 60
4,4'-Diphenylmethane diisocyanate (MDI)	101-68-8	202-966-0	40 - 50

4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with large quantity of water for 15 minutes. Seek medical attention.

Skin Contact: Remove contaminated clothing; flush skin thoroughly with soap and water. If irritation occurs, seek medical attention.

Inhalation (Breathing): If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention.

Ingestion (Swallowing): If swallowed, rinse mouth and drink plenty of water. Do not induce vomiting. If patient is conscious, wash out mouth with water. Never give anything by mouth to an unconscious person. Do not leave victim unattended. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause allergic skin and respiratory reaction. Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

No information available.

5. Firefighting Measures

5.1 Extinguishing media:

Water Fog, Carbon Dioxide, Dry Chemical or Foam.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition and by-products:

Carbon monoxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors.

5.3 Advice for firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be used to cool fire exposed container to prevent pressure build-up and possible auto-ignition or rupture.

5.4 Hazchem code

None allocated.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear full protective clothing, including appropriate respiratory protection.

6.2 Environmental precautions:

Prevent from entering waterways.

6.3 Methods materials for containment and cleaning up:

Spills expected to be small quantities. Collect excess material with absorbents or wipe with dry towels. Wash with a dilute ammonia solution.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Keep containers cool, dry, and away from sources of ignition. Keep cartridges capped and sealed. Protect from freezing. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure limits and recommendations:

Country/Source	Component	Long-term exposure limit 8 hr. OEL, TWA	Short-term (ceiling) exposure limit – 15 min
New Zealand -- WorkSafe	Isocyanates, all (as =NCO)	.02 mg/m^3	.07 mg/m^3
Australia – Safe Work Australia	Isocyanates, all (as =NCO)	0.02 mg/m^3	0.07 mg/m^3
USA – ACGIH TWA	4,4'-Diphenylmethane diisocyanate (MDI)	0.005 ppm	0.02 ppm
USA – OSHA OEL	4,4'-Diphenylmethane diisocyanate (MDI)	--	0.02 ppm
USA – NIOSH REL	4,4'-Diphenylmethane diisocyanate (MDI)	0.005 ppm	0.02 ppm

ACGIH, OSHA and NIOSH have not established any OELs for Polymeric diphenylmethane diisocyanate (pMDI)

8.2 Exposure controls

Respiratory protection:
Use with adequate ventilation to keep vapor concentration below acceptable limits. Observe OSHA standard 29 CFR 1910-94, 1910.107, 1910.108. Product mixed and used as directed emits less than 0.001 ppm MDI vapor as tested by OSHA 47. Ventilation is not required for standard use. If product is use in a way that ventilation is not adequate, use approved chemical/mechanical filters designed to remove a combination of particulate and organic vapors in open and restricted areas. Use approved airline type respirators or hoods in confined areas. Observe OSHA standard 29 CFR 1910.134.

Protective gloves:

The use of chemically resistant gloves is recommended to prevent skin contact. Suitable materials include neoprene, butyl rubber, Viton, Buna N, and chlorinated polyethylene.

Eye protection:

Safety glasses recommended.

Other protective equipment:
Wear suitable protective clothing. Use protective cream if skin contact is likely. Remove and wash contaminated clothing before reuse. Discard contaminated shoes.

9. Physical and Chemical

9.1 Information of basic physical and chemical properties

Appearance:	Brown liquid
Odor threshold:	Not available
pH:	Does not apply
Freezing point:	Not available
Boiling point:	210°C
Flash point:	>400°F / 204°C
Evaporation rate:	Not available
Flammability (solid, gas):	Does not apply
Upper/lower flammability or explosive limits:	Not available
Vapor pressure:	<0.00001 mmHg at 25 °C (72 °F)
Vapor density (Air = 1):	Not available
Specific gravity (H_2O = 1):	1.24 @ 25°C
Solubility in water:	Reacts
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available

9.2 Other Information

Volatiles (Weight %):	0%
VOC Content:	0 g/l

10. Stability and Reactivity

10.1 Reactivity:

Reacts with water, reacts with substances which contain active hydrogen.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

Hazardous reactions will not occur under normal transport or storage conditions.

10.4 Conditions to avoid:

Avoid freezing, high temperatures, flame, high humidity and water contamination.

10.5 Incompatible materials :

Water, alcohols, amines, acids, alkalis, metal compounds.

10.6 Hazardous decomposition products:

Carbon monoxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors.

11. Toxicological Information

11.1 Information on toxicological effects:

Acute toxicity

Eye contact:

Direct eye contact with material or vapors may cause eye irritation.

Skin contact:

Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material. Allergic skin reaction symptoms include redness, swelling, blistering and itching.

Irritation and Sensitization Potential:

Product may be irritating to skin and eyes.

Inhalation (Breathing):

Material has low vapor pressure and inhalation hazard is expected to be minimal. Vapor exposure may cause irritation of the nose and throat. Symptoms may include burning sensation, coughing and shortness of breath, or other signs of respiratory distress. May cause allergic respiratory reaction below exposure guideline in susceptible individuals.

Ingestion:

Ingestion may cause irritation of the gastrointestinal tract.

Toxicity to Animals:

4,4'-Diphenylmethane diisocyanate (MDI):	LD_{50} (oral rat) >2,000 mg/kg
	LD_{50} (dermal rabbit) >9,400 mg/kg
	LC_{10} (inhl rat) 2.24 mg/m^3, 1 hour, aerosol form

Aspiration Hazard:

No aspiration hazard expected.

Chronic Exposure:

Reproductive Toxicity:	Not available.
Mutagenicity:	Not available.
Teratogenicity:	Not available.
Specific Target Organ Toxicity (STOT)	Contains material which causes damage to the upper respiratory tract.
Toxicologically Synergistic Products:	Not available.
Carcinogenic Status:	This substance contains components identified as IARC Category 3, not classifiable. 4,4'-methylenediphenyl diisocyanate (MDI) has not been designated as a carcinogen by IARC, NTP, ACGIH, OSHA, or the EPA. There are inadequate human carcinogenicity data, and only limited animal data. Additionally, the IARC Working Group noted that tumorigenic effects observed in animals may be attributed to non-specific particle effect (IARC monograph 71).

Respiratory/Skin Sensitization

May cause sensitization by inhalation and skin contact..

12. Ecological Information

12.1 Toxicity:

Aquatic Toxicity:

4,4'-Diphenylmethane diisocyanate (MDI):	LC_{50} (96 hr.): > 1,000 mg/l Brachydanio rerio (fish) OECD Guideline 203 static
4,4'-Diphenylmethane diisocyanate (MDI):	EC_{50} (24 hr.): > 1,000 mg/l Daphnia magna (invertebrate) OECD Guideline 202, part 1 static
4,4'-Diphenylmethane diisocyanate (MDI):	EC_{50} (72 hr.): 1,640 mg/l Green algae (aquatic plants) OECD Guideline 201 static
12.2 Persistence and degradability:	Elimination information: <10% BOD of the ThOD (28d) (OECD Guideline 302 C, aerobic, activated sludge) Under test conditions, poorly biodegradable.
12.3 Bioaccumulation potential:	Accumulation in organisms is not to be expected.
12.4 Mobility in soil:	Adsorption to solid soil phase is not expected
12.5 Results of PBT and vPvB Assessment:	This product is not, nor does it contain a substance that is a PBT or vPvB.
12.6 Other adverse effects:	None known.

13. Disposal Considerations

Dispose of product in accordance with National and Local Regulations.

14. Transport Information

UN Number:	Not Listed
UN Proper shipping name:	Not Applicable
Transport hazard class(es):	Not Applicable
Packing group:	Not Applicable
Environmental hazards:	None known
Special precautions:	None known
TDG:	Not Regulated
ICAO/IATA-DGR:	Not Regulated
IMDG:	Not Regulated
ADR/RID:	Not Regulated
Hazchem code	None allocated

15. Regulatory Information

15.1.1. NZ-Regulations

All chemical substances in this product are listed in the New Zealand Inventory of Chemicals (NZIoC) or are exempt

This substance is to be managed using the conditions specified in an applicable Group Standard
HSR Number
HSR002646 Polymers (Toxic, 6.7) Group Standard 2006

15.1.2. EU-regulations

- Contains REACH substances with Annex XVII restrictions:
  56 REACH: Persons already sensitized to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a

protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used. Pregnant women should absolutely avoid inhalation and skin contact.

- Contains no substance on the REACH candidate list
- Contains no REACH Annex XIV substances

15.1.3. Australian-regulations

Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Safework Australia criteria is based on the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals.
All components are listed on the AICS.
Product is classified as hazardous according to criteria of NOHSC Australia.

15.1.4. International-regulations

All chemical substances in this product are listed as “Active” in the US EPA (Environmental Protection Agency) “TSCA Inventory Notification (Active-Inactive) Requirements Rule” (“the Final Rule”). as of Feb. 2019 or are otherwise exempt.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information

Abbreviations and acronyms:
OSHA = Occupational Safety and Health Administration
CLP = Classification, Labeling and Packaging Regulation
STOT = Specific Target Organ Toxicity
LD_{50} = Median Lethal Dose
DNEL = Derived No Effect Level
ACGIH = American Conference of Governmental Industrial Hygienists
TSCA = Toxic Substances Control Act (USA)
DSL = Domestic Substances List (Canada)
AICS = Australian Inventory of Chemical Substances

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Indication of Changes:	No changes. Written in accordance with the provisions of OSHA 1910.1200 App D (2012) and Canada HPR (SOR/2015-17) (WHMIS 2015). (GHS format)

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.